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(54) **MODULAR SYSTEMS PACKAGE FOR AN ELECTRICALLY MOTORIZED VEHICLE**

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(58) **Field of Classification Search**

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See application file for complete search history.

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(56) **References Cited**

U.S. PATENT DOCUMENTS

3,199,922 A 8/1965 Krenz
3,921,741 A 11/1975 Garfinkle

(Continued)

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FOREIGN PATENT DOCUMENTS

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CN 1944176 A 4/2007
CN 101024379 A 8/2007

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OTHER PUBLICATIONS

http://www.greenspeed.us/e%2B_plus_electric_bicycle_battery.htm,
date unknown.

(Continued)

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(57) **ABSTRACT**

A system, method, and device for operations of an electrically motorized vehicle. The vehicle can utilize an electrically motorized wheel to convert a non-motorized wheeled vehicle to an electrically motorized wheeled vehicle. The device of the electrically motorized wheel can include a modular systems package including a control system operable to continuously control the device of the electrically motorized wheel in response to a user input.

15 Claims, 63 Drawing Sheets

